5,776,760

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We claim:

1. An isolated double-stranded DNA molecule which hybridizes to the DNA sequence of SEQ ID NO:3, wherein said DNA molecule encodes a glyphosate oxidoreductase enzyme.

5,776,760

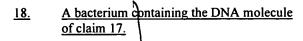
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>

2. A recomminant bacterium containing the double-straded DNA molecule of claim 1.

* * * * *

	<u>3.</u>	The DNA molecule of claim 1, wherein said DNA molecule comprises SEQ ID NO:17.
Sulaz	<u>4.</u>	A DNA molecule comprising SEQ ID NO:4.
	<u>5.</u>	An isolated DNA molecule that is capable of hybridizing to the DNA sequence of SEQ ID NO:4, whereit said DNA molecule encodes a glyphosate podoreductase enzyme.
	<u>6.</u>	A bacterium containing the DNA molecule of claim 5.
Sul a3	<u>7.</u>	A DNA molecule comprising SEQ ID NO:6.
,	<u>8.</u>	An isolated DNA molecule that is capable of hybridizing to the DNA sequence of SEQ ID NO:6, wherein said DNA molecule encodes a glyphosate oxidoreductase enzyme.
	<u>9.</u>	A bacterium comaining the DNA molecule of claim 8.
Swa4	<u>10.</u>	A DNA molecule comprising SEQ ID NO:7.
	<u>11.</u>	An isolated DNA molecule that is capable of hybridizing to the DNA sequence of SEQ ID NO:7, wherein said DNA molecule encodes a glyphosate oxidareductase enzyme.
	<u>12.</u>	A bacterium containing the DNA molecule of claim 11.
Inh a5	<u>13.</u>	A DNA molecule comprising SEQ ID NO:8.
	<u>14.</u>	An isolated DNA molecule that is capable of hybridizing to the DNA sequence of SEQ ID NO:8, wherein said DNA molecule encodes a glyphosate oxidoreductase enzyme.
	<u>15.</u>	A bacterium containing the DNA molecule of claim 14.
Sul ales	<u>16.</u>	A DNA molecule comprising SEQ ID NO:13
	<u>17.</u>	An isolated DNA molecule that is capable of hybridizing to the DNA sequence of SEQ ID NO:17, wherein haid DNA molecule encodes a glyphosate oxidoreductase enzyme.



- A method for selecting transformed plant <u> 19.</u> cells comprising:
 - introducing a chimeric gene <u>(a)</u> comprising SEQ ID NO:3, 4, 6, 7, 8 or 17 into plant cells;
 - placing said plant cells on a plant <u>(b)</u> growth media containing glyphosate; and
 - selecting plant cells that exhibit (c) growth on said glyphosate containing media.
- <u>20.</u> A method for selecting transformed plant
 - cells comprising:
 (a) introducing a chimeric gene
 comprising a DNA molecule encoding a glyphosate oxidereductase enzyme into plant dells, wherein the DNA molecule is capable of hybridizing to SEQ ID NO:3, 4, 6, 7, 8 or 17;
 - placing said plant cells on a plant <u>(b)</u> growth media containing glyphosate; and
 - selecting plant cells that exhibit (c) growth on said glyphosate containing media.